

IN THE SPECIFICATION

Please amend the following paragraphs of the published specification to read as follows:

[0065] As described hereinabove, according to this embodiment, the first wavelet transformer 300 comprises: M-1 single sample delay elements 121 for inputting an in-phase signal and an orthogonal signal output from the first LPF 304a and the second LPF 304 b; M ~~upsamplers~~ downsamplers 127 for inputting output data of the single sample delay elements 121; a first prototype filter 128 for inputting output data of the M ~~upsamplers~~ downsamplers 127; and a high-speed discrete cosine transformer 124 for inputting output data of the first prototype filter 128. It is thus possible to perform a first wavelet transform at high speed so that it is possible to perform data reception at high speed (at a higher speed than in Embodiment 3) as a whole.

[0076] As described hereinabove, according to this embodiment, the first wavelet transformer 300 comprises: M-1 single sample delay elements 121 for inputting an output signal of the LPF 304; M ~~upsamplers~~ downsamplers 127 for inputting output data of the single sample delay elements 121; a first prototype filter 128 for inputting output data of the M ~~upsamplers~~ downsamplers 127;

and a high-speed discrete cosine transformer 124 for inputting output data of the first prototype filter 128. The second wavelet transformer 305 comprises: M-1 single sample delay elements 121 for inputting an output signal of the LPF 304; M upsamplers downsamplers 127 for inputting output data of the single sample delay elements 121; a second prototype filter 129 for inputting output data of the M upsamplers downsamplers 127; and a high-speed discrete sine transformer 126 for inputting output data of the second prototype filter 129. It is thus possible to perform a first wavelet transform and a second wavelet transform at high speed so that it is possible to perform data reception at high speed (at a higher speed than in Embodiment 5) as a whole.